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**REMARKS/ARGUMENTS**

Reconsideration is respectfully requested in view of the preceding amendments and following remarks.

**35 U.S.C. 112**

Claims 1-34 stand rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.

Applicants respectfully submit that when read in the context of the specification, the claims particularly point out and distinctly claim the subject matter which applicants regard as the invention. It appears that most of the § 112 rejections are based more upon the scope of the claim terms rather than the meaning of the claim terms. It is respectfully submitted that "the claims must be interpreted as broadly as their terms reasonably allow. See MPEP § 2111.01

The following claim language was indicated as being unclear and indefinite:

I) The Office Action states claim 1 "line 1, it is unclear how the module type definition table is maintained since nothing is ever done to it throughout this claim < i.e. does the table get changed after detecting an undefined module?>" Claim 1 has been amended to make it clear the module type definition table is the external module type definition table that is updated.

The Office Action states "line 3, it is uncertain what is meant by identifying < i.e. is there an ID or name associated with the module type? >." Applicants respectfully submit that this meaning is clear in light of the specification. See, for example, ¶ 0030.

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The Office Action states "line 4, it is uncertain what is meant by "external module type definition table" < i.e. what is the table external to? The operating system? >" Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶ 0036.

The Office Action states "it is also unclear if 'a module type definition table' found in line 1 refers to the "external module type definition table" < i.e. are they the same definition table? >." Claim 1 has been amended to make it more clear that both refer to the external module type definition table.

The Office Action states "line 5, it is uncertain how the method is able to determine that the module type is not defined < i.e. is there a list of IDs in the table that the invention goes through to see if the ID of the module type cannot be found in the list in the table? >." Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶ 0030.

The Office Action states "line 6, it is unclear what is meant by dynamically creating a definition < i.e. is a random ID automatically assigned to the module? What is the definition, an ID associated with the module? >." Applicants respectfully submit that the definition is more than a random ID assigned to the module. Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶¶ 0037-0039.

The Office Action states "line 5, it is unclear what is meant by "at the direction" of the static operating system kernel. It is phrased confusingly." This claim has been amended to make this more clear.

ii) The Office Action states "line 2, and similarly claim 12, it is unclear what is meant by "operator generated" < i.e. does the operator have to be human? >." Applicants

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respectfully submit that this meaning is clear in light of the specification, and that the operator may, but not necessarily, be human. For example, a human can generate the claimed DLKM type identifier.

iii) The Office Action states "as per claims 2, 3, 12, 13, it is unclear what is meant by 'a DLKM type identifier'." Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶ 0031.

iv) The Office Action states "as per claims 4, 14, 24, it is unclear what is meant to 'conduct pre-registration support.' Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶¶ 0032-33.

v) The Office Action states "as per claims 5, 15, it is unclear what is meant to 'conduct registration function.'" Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶¶ 0032-33.

vi) The Office Action states "as per claims 6, 16, 25, it is unclear what is meant to 'conduct post-registration support.'" Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶¶ 0032-33.

vii) The Office Action states "as per claims 7, 17, 22, it is unclear what is meant to 'conduct pre-loading support.'" Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶¶ 0032-33.

viii) The Office Action states "as per claim 8, 18, 23, it is unclear what is meant to 'conduct post-loading support'." Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶¶ 0032-33.

ix) The Office Action states "as per claim 11, line 1, it is unclear how the module type definition table is maintained since nothing is ever done to it throughout this claim <

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i.e. does the table get changed after detecting an undefined module?>" Applicants respectfully submit that claim 11 has been amended to make this more clear. Particularly, claim 11 has been amended to require "storing the module type data, including data identifying at least one support module associated with the module type, thereby updating the external module type definition table."

The Office Action states "line 3, it is unclear how the logic can detect a module is undefined < i.e. does it look through the table? >." Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶ 0030.

The Office Action states "line 7, it is unclear how the logic can identify a support module associated with the module < i.e. is there a list of support module IDs that is in the module, from which the system have to look at to find the support modules? >." Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶¶ 0032-0033.

The Office Action states "line 11-12, it is unclear what is meant by "externally storing data defining the module type" <i.e. external to the operating system? >" Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶ 0030.

The Office Action states "it is also unclear how the data defining the module type is related to the definition table and the new module type <i.e. do the data correspond to the new module type? Is it stored in the definition table? >." Claim 11 has been amended to make this more clear. Particularly, claim 11 has been amended to require "storing the module type data, including data identifying at least one support module

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associated with the module type, thereby updating the external module type definition table."

The Office Action states "lines 5, 7, 9, 11 all recites "a computer readable medium", it is unclear as to how they are related <i.e. are they the same computer readable medium? >." Applicants have amended this claim.

x) The Office Action states "as per claim 21, line 2, it is unclear how the module type definition table is maintained since nothing is ever done to it throughout this claim. Claim 21 has been amended make this more clear and requires "instructions to store the data defining the module type, including the associated support module, in the external module type definition table in a location external to the static operating system kernel."

The Office Action states "line 4, it is uncertain what is meant by identifying." Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶ 0030.

The Office Action states "line 5, it is unclear how the instructions can [s/c] determined a module is undefined <i.e. not in found in the table? >." Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶ 0030.

The Office Action states "line 6, it is unclear how data relates to module type <i.e. do the data contain module type information? >" Applicants respectfully submit that this meaning is clear in light of the specification. See, for example, ¶¶ 0025-0026.

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xi) The Office Action states "as per claim 26, line 1, it is unclear what a static operating kernel is." Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶ 0022.

The Office Action states "line 4, it is unclear how identifying is done <i.e. does it look at an ID? >". Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶ 0030.

The Office Action states "line 5, it is unclear what is meant by an "external module type definition table" <i.e. what is it external to? >". Applicants respectfully submit that this meaning is clear in light of the specification. See, for example, ¶ 0036.

The Office Action states "lines 3, 4, 6, 8, 7, 9, 11, all recites "a computer readable medium", it is unclear as to how they are related <i.e. are they the same computer readable medium? >." Claim 26 has been amended.

xii) The Office Action states "as per claims 28 and 29, both claim for an operator. It is unclear what an operator might be <i.e. does it have to be human? >. Applicants respectfully submit that this is clear in light of the specification. An operator may be human.

xii) The Office Action states "as per claim 30, line 1, it is unclear what a static operating system kernel is <i.e. is the operating system kernel not executing anything? >." Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶ 0022.

The Office Action states "line 6, it is unclear what an "external module type reference table" is <i.e. what is the table external to? >. Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶ 0036.

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The Office Action states "through out claim 30 and its dependent claims 32, 33, and 34, they all recites "a computer readable medium", it is unclear as to how they are related <i.e. are they the same computer readable medium? >." These claims have been amended.

xiv) The Office Action states "as per claim 32, it is unclear what an operator might be." Applicants respectfully submit that this is clear in light of the specification. An operator may be a human.

xv) The Office Action states "as per claim 33, line 4, it is unclear what "software generated module type" is. <i.e. how can a software generate a module? Is the software calling for a new function to be loaded into the system? Or is it the case that the software is the module itself? >." Applicants respectfully submit that this is clear in light of the specification. See, for example, ¶ 0031.

***Claim Rejections Under 35 U.S.C. 102(e)***

Claims 1, 9, 10, 30, 31 and 34 stand rejected under 35 U.S.C. 102(e) as being anticipated by Berg et al. ("*Berg*").

It is respectfully submitted that U.S. Pat. No. 6,449,660 ("*Berg*") fails to anticipate claim 1. "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987); see also *MPEP* §2131.

Claim 1 as presently amended requires "dynamically creating a module type definition including at least one support module identifier." It is respectfully submitted

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that *Berg* does not teach or disclose dynamically creating a module type definition. A module type definition includes more than an "identification" or name for the module type. In addition, claim 1 has been amended to require the definition to include at least one support module identifier, which is not disclosed in *Berg*.

The cited portion of *Berg* for a module type definition is "If DASD device 882 is previously unknown to computer system 800 (i.e. this is the first time that computer system 800 has been power-on with DASD device 882 connected), the instantiate step (i.e., sep 8) will amount to the creation of an IoHri object comprising default configuration data (e.g., Rtok, RscName, etc.)." The default configuration data appears to be assigning a default "identification" to the input/output hardware device. For example, "much like people have more than one form of identification (e.g., a name, a social security number, a employee serial number, etc.), RscName, Rtok, Srid, and Uid objects are each different forms of identification for a single I/O device." Col. 15:25-30. It is respectfully submitted that creating a default form of identification is not dynamically creating a module type definition that includes at least one support module identifier. Accordingly, Applicants respectfully submit that claim 1, and the claims that depend therefrom are in condition for allowance and request notice to that effect.

Claim 9 requires "each at least one of a pointer and a reference being respectively associated with a support module." The office action states that "*Column 14, lines 49-51; Column 17, lines 27-40: the child device corresponds to the support module.*" It is respectfully submitted that the "child" device is not a support module. The cited portions of *Berg* include: "The notion of children is explained in the text associated with FIG. 14A." Col. 14:49-51; and, "The operations are . . . the enrollChild()



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operation, which is defined to be used to inform parent devices of the existence of a child device (see text associated with FIG. 14A); the enrollParent() operation, which is defined to inform child devices of the existence of a parent . . ." Col. 17:27-40. As used in the specification, a support module may, for example, "be used to provide module type-specific support for the identified module. Such support modules may include logic for providing, for example, pre-loading support, post-loading support, pre-registration support, post-registration support and/or module registration." See ¶0032. A child input/output hardware device does not provide such support for the parent hardware device. A parent hardware device can function on its own and does not rely on a child hardware device for support. *Berg* merely discloses informing the parent hardware device of the existence of a child. Accordingly, in addition to the reason *Berg* fails to anticipate claim 1, *Berg* also fails to anticipate claim 9 for this second Independent reason. Applicant respectfully submit that claim 9 is in condition for allowance and request notice to that effect.

*Berg* fails to anticipate claim 10 for the reasons set forth in detail above with respect to claims 1 and 9. Applicants respectfully submit that claim 10 is also in condition for allowance and request notice to that effect.

Amended claim 30 requires means on the computer readable medium to identify at least one support module and associate that support module with a definition of the module type in the external module type reference table. As set forth in detail *supra* with respect to claim 9, *Berg* fails to disclose identifying at least one support module and associating that support module with a definition of the module type in the external module type reference table. Accordingly, Applicants respectfully submit that claim 30

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and claim 31 that depends from claim 30 are in condition for allowance. Similarly, *Berg* fails to anticipate claim 34 for the reasons set forth *supra* with respect to claim 9 above. Applicant respectfully submit that claim 34 is in *also* condition for allowance and request notice to that effect.

***Claim Rejections Under 35 USC § 103***

Claims 4-8, 11 and 14-29 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Berg* in view of: The Windows NT Device Driver Book by Art Baker, 1997 ("*Baker*").

Claims 12, 13 and 32 and 33 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Berg* in view of *Baker* further in view of Managing and Developing Dynamically Loadable Kernel Modules ("*HP*") Copyright 2001, Hewlett-Packard Company.

Claims 2 and 3 stand rejected under 35 U.S.C. 103(a) as being unpatentable over *Berg* in view of *HP*.

The "prior art reference (or references when combined) must teach or suggest all the claim limitations." MPEP § 2142.

Claims 4-8 depend from claim 1, which Applicants respectfully submits is in condition for allowance. As set forth in detail above, *Berg* fails to disclose dynamically creating a module type definition including at least one support module identifier. *Baker* also fails to disclose this claimed feature. As a result, Applicants respectfully submit that claims 4-8 are in condition for allowance.

Similarly, *HP* fails to teach this claimed feature. Accordingly Applicants respectfully submit that dependent claims 2-3 are also in condition for allowance.

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Claim 11 requires "support module identification logic on the computer readable medium for assigning a new module type associated with the module." The Office Action states that "*Column 14, lines 49-51; Column 17, lines 27-40: the child device corresponds to the support module.*" As set forth in detail *supra* with respect to claim 9, it is respectfully submitted that the "child" device is not a support module. Baker also fails to disclose support module identification logic. Accordingly, because neither *Berg* nor *Baker* teach or disclose this required element, *Berg* in view of *Baker* fails to render claim 11 obvious. Applicants respectfully submit that claim 11 and the claims that depend therefrom are now in condition for allowance and request notice to that effect.

In addition, claim 11 as amended requires "module type definition logic on the computer readable medium for dynamically defining the module type as a function of the module type and for externally storing the module type data, including at least one support module associated with the module type, thereby updating the external module type definition table." *Berg* fails to disclose dynamically defining the module type as a function of the module type. See argument *supra* with respect to claim 1. Thus, it is respectfully submitted that for this additional reason, *Berg* in view of *Baker* fails to render this claim obvious. Accordingly, Applicants respectfully submit that claim 11 is in condition for allowance and request notice to that effect.

Similarly, neither *Baker* nor *HP* disclose this claimed feature. Accordingly, claims 12-20 that depend from claim 11 are also believed to be in condition for allowance and request notice to that effect.

Claim 21 was rejected on the grounds that "claim 21, it contains all the instructions necessary to perform the method steps capable by the system of claim 11.

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since claim 11 is rejected, claim 21 is rejected as well." Accordingly, for reasons set forth with claim 11, Applicants respectfully submit that amended claim 21 and the claims 22-25 that depend therefrom are now in condition for allowance and request notice to that effect.

Claim 26 requires "logic on the computer readable medium to identify at least one support module associated with the module type in the external module type definition table." The office action states that "Column 14, lines 43-50; Column 17, lines 27-40; children corresponds to the support modules." As set forth in detail *supra* with respect to claim 9, it is respectfully submitted that the "child" device is not a support module. In addition, *Baker* fails to disclose logic to identify at least one support module. Accordingly, because neither *Berg* nor *Baker* teach or disclose this required element, *Berg* in view of *Baker* fail to render claim 26 obvious. Applicant respectfully submit that claim 26 and claims 27-29 that depend therefrom are now in condition for allowance and request notice to that effect.

Claims 32-33, depend from claim 30. Amended claim 30 requires "means on the computer readable medium to identify at least one support module and associate that support module with a definition of the module type." For the reasons set forth in detail *supra* with respect to claim 9, *Berg* fails to teach means to identify at least one support module and associate that support module with a definition of the module type. With respect to claims 32 and 33, neither *Baker*, nor *HP* teach or disclose "means on the computer readable medium to identify at least one support module and associate that support module with a definition of the module type." Accordingly, Applicant respectfully

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submit that claims 32-33 that depend therefrom are now in condition for allowance and request notice to that effect.

Since all of the independent claims, as currently amended, are believed to overcome the Examiner's objections and rejections, Applicants believe that the claims that depend from these independent claims are now also in condition for allowance respectfully requests notice to that effect.

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**Conclusion**

Based on the foregoing amendments and remarks, the Applicants believe that all of the claims in this case are now in a condition for allowance and an indication to that effect is earnestly solicited. Furthermore, if the Examiner believes that additional discussions or information might advance the prosecution of this case, the Examiner is requested to contact the undersigned at the telephone number indicated below.

Respectfully submitted,



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